

What is claimed is:

1. A communication system including a plurality of transfer devices for transferring packets to a current location of a mobile terminal, a plurality of access router devices arranged in a network to be able to connect to the mobile terminal, and the mobile terminal connected to an access router device to receive the packets from a transfer device through the access router device, the system comprising:

a first transmitter for transmitting a request for information which specifies a transfer device used by the mobile terminal for packet reception and anycast address which indicates address regarding the plurality of transfer devices ,to the access router device connected to the mobile terminal;

a second transmitter for transmitting the request to a transfer device which has a shortest distance from the access router device on the network among the plurality of transfer devices, based on the anycast address relayed to be transmitted through the access router device; and

a third transmitter provided at the transfer device for transmitting the information which specifies the transfer device to the mobile terminal based on the request.

2. The communication system according to claim 1, wherein each of the transfer devices transmits packets, transmitted from a communication opponent device and addressed to the mobile terminal, to the access router device based on an on-link care of address which indicates a location of the current location of the mobile terminal,

the first transmitter transmits ,as the request,

instruction information, which instructs a transfer device to execute packet transmission processing based on the on-link care of address of the mobile terminal ,to the access router device connected to the mobile terminal,

the second transmitter transmits the instruction information as the request,

the third transmitter further executes packet transmission processing based on the on-link care of address of the mobile terminal in accordance with the instruction information, and

the mobile terminal includes an acquisition unit configured to acquire information specifying the transfer device transmitted from the third transmitter, as the information which specifies a transfer device used for packet reception.

3. A mobile terminal used in a communication system which includes a plurality of transfer devices for transferring packets to a current location of the mobile terminal, a plurality of access router devices arranged in a network to be able to connect to the mobile terminal, and the mobile terminal connected to an access router device to receive the packets from a transfer device through the access router device, the mobile terminal comprising:

a first transmitter for transmitting a request for information which specifies a transfer device used for packet reception and anycast address which indicates address regarding the plurality of transfer devices ,to the access router device connected to the mobile terminal; and

a receiver for receiving information specifying a

transfer device transmitted from the transfer device ,which has a shortest distance from the access router device on the network among the plurality of transfer devices ,when the request is transmitted to the transfer device based on the anycast address relayed to be transmitted through the access router device.

4. The mobile terminal according to claim 3, further comprising:

a first manager for managing an on-link care of address which indicates a location of the current location of the mobile terminal,

wherein, when the on-link care of address managed by the first manager is changed, the first transmitter transmits, to the access router device connected to the mobile terminal, the request for the information which specifies a transfer device used for packet reception and the anycast address which indicates the address regarding the plurality of transfer devices.

5. The mobile terminal according to claim 3,

a second manager is disposed to manage information which specifies a transfer device currently used for packet reception, and

a second transmitter is disposed to transmit, when information specifying a first transfer device received by the receiver is different from information specifying a second transfer device managed by the second manager, information to instruct execution of packet transmission processing based on the on-link care of address corresponding to the mobile terminal ,to the first transfer device, and information to instruct execution of packet transmission processing based on

information which specifies the first transfer device ,to a home agent device.

6. The mobile terminal according to claim 5,

wherein information specifying the transfer device received by the receiver is necessary for generating a regional care-of address which contains information specifying a network in which the transfer device is present,

a generator is disposed to generate the regional care-of address based on information necessary for generating the regional care-of address, and

the second manager manages the regional care-of address generated by the generator as information which specifies a transfer device currently used for a packet reception.

7. The mobile terminal according to claim 5,

wherein information specifying the transfer device received by the receiver is the regional care-of address which contains information to specify a network in which the transfer device is present, and

the second manager manages the regional care-of address received by the receiver as information which specifies a transfer device currently used for packet reception.

8. The mobile terminal according to claim 7,

the second transmitter transmits, when a first regional care-of address received by the receiver is different from a second regional care-of address managed by the second manager, first instruction information to instruct execution of packet transmission processing based on a correspondence between the

first regional care-of address and the on-link care of address managed by the first manager ,to a transfer device which has transmitted the first regional care-of address, and transmits second instruction information to instruct execution of packet transmission processing based on the first regional care-of address ,to the home agent device.

9. A mobile terminal used in a communication system which includes a plurality of transfer devices for transferring packets to a current location of the mobile terminal, a plurality of access router devices arranged in a network to be able to connect to the mobile terminal, and the mobile terminal connected to an access router device to receive the packets from a transfer device through the access router device, the mobile terminal comprising:

- a first transmitter for transmitting instruction information which instructs a transfer device to execute packet transmission processing based on an on-link care of address regarding the mobile terminal, which indicates a location of the current location of the mobile terminal ,and anycast address which indicates address regarding the plurality of transfer devices ,to the access router device connected to the mobile terminal;

- a receiver for receiving information specifying a transfer device transmitted from the transfer device ,which has a shortest distance from the access router device on the network among the plurality of transfer devices ,when the instruction information is transmitted to the transfer device based on the anycast address relayed to be transmitted through the access router device; and

a first acquisition unit configured to acquire the information specifying the transfer device received by the receiver as information which specifies a transfer device used for packet reception.

10. The mobile terminal according to claim 9, the mobile terminal further comprising:

a first manager for managing the on-link care of address of the mobile terminal;

a second manager for managing information which specifies a transfer device currently used for packet reception; and

a second transmitter for transmitting, when the on-link care of address managed by the first manager is changed, information which instructs execution of packet transmission processing based on the changed on-link care of address ,to a transfer device based on the information specifying the transfer device currently managed by the second manager,

wherein, after the execution of the transmission processing by the second transmitter, the first transmitter transmits instruction information which instructs a transfer device to execute packet transmission processing based on the on-link care of address of the mobile terminal at each time interval shorter than the fixed period of time, and the anycast address which indicates the address regarding the plurality of transfer devices ,to the access router device connected to the mobile terminal.

11. A mobile terminal used in a communication system which includes a plurality of transfer devices for transferring packets to a current location of the mobile terminal, a

plurality of access router devices arranged in a network to be able to connect to the mobile terminal, and the mobile terminal connected to an access router device to receive the packets from a transfer device through the access router device, the mobile terminal comprising:

a first transmitter for transmitting instruction information which instructs a transfer device to execute packet transmission processing ,based on a correspondence between the on-link care of address of the mobile terminal , which indicates a location of the current location of the mobile terminal, and a predetermined regional care-of address, which contains information specifying a network in which the transfer device is present ,and anycast address which indicates address regarding the plurality of transfer devices ,to the access router device connected to the mobile terminal; and

an acquisition unit configured to acquire the regional care-of address which has been transmitted from a transfer device , which has a shortest distance from the access router device on the network among the plurality of transfer devices, and which contains information specifying the network in which the transfer device is present ,as information which specifies a transfer device used for packet reception ,in a case where the predetermined regional care-of address contains no information specifying a network in which the transfer device is present when the instruction information is transmitted to the transfer device based on the anycast address relayed to be transmitted through the access router device.

12. The mobile terminal according to claim 11, further comprising:

a second transmitter is disposed to transmit the instruction information ,which instructs execution of the packet transmission processing based on the regional care-of address, acquired by the acquisition unit to a home agent device.

13. The mobile terminal according to claim 11,

wherein the information specifying the transfer device is an address allocated to the transfer device,

the mobile terminal further comprising:

a manager is disposed to manage an address of a transfer device currently used for packet reception, and

a second transmitter is disposed to transmit, when an address of a first transfer device acquired by the acquisition unit is different from an address of a second transfer device currently managed by the manager, information to instruct execution of packet transmission processing based on the address of the first transfer device ,to the home agent device.

14. A transfer device used in a communication system which includes a plurality of transfer devices for transferring packets to a current location of a mobile terminal, a plurality of access router devices arranged in a network to be able to connect to the mobile terminal, and the mobile terminal connected to an access router device to receive the packets from the transfer device through the access router device, comprising:

a receiver for receiving , when the mobile terminal transmits a request of information which specifies a transfer device to be used for packet reception and anycast address which

indicates address regarding the plurality of transfer devices to the access router device connected to the mobile terminal, the request and the anycast address transmitted based on the anycast address; and

a transmitter for transmitting information which specifies the transfer device to the mobile terminal based on the request.

15. The transfer device according to claim 14, further comprising: a storage for storing one or a plurality of addresses in care of a network which contain information specifying a network in which the transfer device is present but which are not associated with the mobile terminal,

wherein the transmitter transmits any address selected from among one or the plurality of addresses in care of the network stored in the storage as information specifying the transfer device.

16. A transfer device used in a communication system which includes a plurality of transfer devices for transferring packets to a current location of a mobile terminal, a plurality of access router devices arranged in a network to be able to connect to the mobile terminal, and the mobile terminal connected to an access router device to receive the packets from the transfer device through the access router device, comprising:

a first transmitter for transmitting packets transmitted to the mobile terminal from a communication opponent device, to the access router device, based on an on-link care of address which indicates a location of the current location of the mobile

terminal;

a receiver for receiving instruction information which instructs a transfer device to execute packet transmission processing based on the on-link care of address regarding the mobile terminal transmitted from the access router device connected to the mobile terminal; and

a second transmitter for executing packet transmission processing based on the on-link care of address regarding the mobile terminal in accordance with the instruction information, and transmitting information which specifies the transfer device to the mobile terminal.

17. The transfer device according to claim 16,

wherein the first transmitter executes transmission processing of packets addressed to the mobile terminal based on a correspondence between the on-link care of address which indicates the location of the current location of the mobile terminal, and an regional care-of address which contains information specifying a network in which the transfer device is present,

the receiver for receiving, as the instruction information, information which instructs a transfer device to execute packet transmission processing based on a correspondence between the on-link care of address regarding the mobile terminal, transmitted from the access router device connected to the mobile terminal, and a predetermined regional care-of address,

a correspondence generator is disposed to generate, when the predetermined regional care-of address contains no information specifying the network in which the transfer device

is present, a correspondence between the on-link care of address, and any address selected from among one or a plurality of addresses in care of a network which contain the information specifying the network in which the transfer device is present but which are not associated with the mobile terminal, and

the second transmitter executes packet transmission processing based on the correspondence generated by the correspondence generator, and transmits to the mobile terminal the regional care-of address as the information specifying the transfer device.